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HOLDING HANDS[1]

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The hand, as much as the face, is an organ for expression of the emotions.

Holding hands creates a bond of feeling—an emotional continuity between two people. From babyhood to old age such a simple gesture provides the feeling that fights against loneliness. It is the physical conveyance of sympathy. The derivation of the word "sympathy" means literally "feeling with" someone.

The treatment of hand injuries offers the supreme opportunity for suitably sympathetic souls to supplement the needs of these patients. Literally to help them by holding hands. Even before an operation, examination of the hand and explanation of the surgery to be performed provides a great chance for verbal reassurance to be confirmed by this intimate contact between the surgeon's hands and the patient's. Preoperative physiotherapy reinforces the confidence of the patient in his helpers, if it is gently but positively proceeding to the optimum range of, for example, interphalangeal joint movement which the surgeon has stipulated before he will be able to insert a tendon graft. The patient's mind must work his hand and this preoperative conditioning of the hand must never neglect the equally important preoperative conditioning of the mind.

During an operation on the hand, most of my patients are conscious, because of the virtually universal use of a brachial plexus block type of regional anaesthesia. Supplementary Valium (R) is given to relieve excess apprehension—but the attentive nurse or anaesthetist who is present to reassure and, if necessary, to hold the other hand, continues this preoperative psychological preparation. To see the surgeon and to be reassured by him at the end of the operation—to be literally "given" the operated hand to hold as he is returned to his ward, is the start of the patient's recovery.

Most patients are able to leave hospital within one or two days of the operation unless some complicated tissue transfers are in progress, such as an abdominal flap, but in every case it is essential that the surgeon visit that patient within the next 24 hours. Any pain and its nature must immediately be reported. To this end, no analgesia stronger than A.P.C. is ordered so that the precise quality of the pain can be explained by the patient. Thus a "stinging" pain is consistent with a surgical incision and should respond to A.P.C.; "burning" pain means pressure and demands instant relief of that pressure; "throbbing" pain signifies fluid under pressure and the hand must be inspected by the surgeon to exclude the threat of a haematoma.

Neglect of pain and failure to visit are certain ways to increase anxiety on the part of the patient with loss of confidence in the surgeon. Only too often the physiotherapist is then confronted with a severely disturbed patient two or three weeks later.

The surgeon who "does his own physiotherapy" is merely continuing the emotional as well as the physical care of the patient. He will continue supervision even if he has to call in more frequent help than his time allows—but the physiotherapist is continuing this "holding hands" process.

Using physiotherapy as a dumping ground for "difficult" patients is to be deprecated. This sad state of affairs indicates a total

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break-down of the "holding hands" relationship so essential for the successful outcome of any surgery on the hand. Likewise the physiotherapist who "attacks" the patient with forceful, painful, passive manipulations, hot baths and electricity is unlikely to establish the relationship necessary for co-operation and continuing improvement.

REASONS FOR FAILURE TO IMPROVE IN FUNCTION

Local Organic Factors

The immediate postoperative significance of pain has been already mentioned but pain at the stage when progressive function is sought will impede progress and must be diagnosed and relieved without delay. Any of these local organic factors can initiate a self-perpetuating sequence of pain leading to local reflex inhibition of movement together with reflex vasodilatation and swelling. These in turn reduce movement even more and increased pain on attempting movement leads to the exacerbation of the local reflex phenomena of inhibition of movement and vasodilatation to a greater and greater cyclical degree.

Often the most elementary local organic causes of pain can be overlooked. Thus *unhealed wounds and unhealed fractures* should be treated by appropriate immobilisation or restriction of movement until sufficiently healed to allow gradual increase of pain-free movement.

A *neuroma* is not necessarily a large palpable mass on the end of a major peripheral nerve. It can be quite invisible to the naked eye yet result in an exquisitely tender easily localised pinpoint of pain, of which the patient is absolutely terrified and which inhibits movement not only of finger but perhaps of the whole limb as he protects this area. A neuroma may be subjected to traction in a scar, or to pressure against the end of an amputation stump or over the volar aspect of a metacarpophalangeal joint in the palm. It can produce pain leading to inhibition of efforts on the part of the patient to restore full function to the hand. The treatment of neuromas is not part of this paper but resection of nerves during surgery for painful neuromata is directed towards placing the freshly cut end of the nerve in soft tissue remote from pressure areas and remote from the possibility of scar adhesion and traction.

Anaesthesia of a part of the hand will lead to failure to incorporate it in the normal pattern of hand activity. If even half the pulp of the index finger cannot be felt, the whole of that finger is left out of manipulative activities. Sensory rehabilitation, which involves teaching the patient to interpret those abnormal messages from hypoaesthetic and paraesthetic areas, is an important part of the physiotherapeutic treatment—with the hope that relatively normal sensation, in quality even if slightly decreased in quantity, will ultimately be regained.

Tight scars can inhibit movement by producing pain and early correction by local rearrangement of the scar or by grafting, will produce dramatic relief.

Adhesions whether periarticular or peritendinous will limit the movement of joint or tendon. After recent surgery or injury to the part adhesions are inevitable and must be regarded as normal. It is their normal resolution over the next few weeks and months which is to be noted and assisted where possible. Remodelling of the remaining collagenous tissue after adhesions have been largely resorbed is a function of carefully directed movement of the parts so that, while adhesions may remain, their structure is such that the joint can move still through a useful range of movement or a tendon have an excursion capable of acting effectively. Rupture of the adhesions by excessive passive movement or perpetuation of the higher protein phase of transudation after injury, such as follows excessive heat treatment, will both slow up or even reverse the essential process of resorption and remodelling.

These painful or potentially painful local organic factors operate through the vicious circle outlined earlier, of pain leading to swelling leading to further pain leading to further reflex swelling. The effect of increased vasodilatation in bone is to produce resorption. To some extent the same changes occur in the glossy sweating skin of a disused painful hand.

It must be remembered that this is a general regional change through all the tissues of the

hand from the dermis through to the medullary cavity of the bones. It is only because changes have been recorded better and given names like "osteoporosis" and the clinical picture has been labelled "Sudek's Atrophy" that we tend to think in pigeon-hole type diagnoses, whereas the entire biological status of the hand has been altered as a result of local reflex initiated by painful stimuli.

A specific anatomical entity which can occur with this swelling phenomonen is that produced when the flexor retinaculum is involved in the swelling so that pressure on the median nerve produces the *carpal tunnel syndrome*. It is not uncommon even after minor operations, as for Dupuytren's contracture. The syndrome is merely another manifestation of the generalized change in the connective tissue of the hand, from the dermis through the ligaments and peritendinous structures to the skeleton itself. It is sometimes associated with trigger finger if the swelling involves the pulleys of the flexor tendon sheath and creates a nodule in the tendon which impacts and causes a troublesome syndrome requiring its own relief.

It is the function of the physiotherapist and the surgeon to break the vicious circle created by local organic factors to allow supervised recovery of function. The worst that can be done is to add to this sequence by over-enthusiastic manipulation of painful parts and the excessive application of heat which can only increase oedema. The application of cold has the more rational basis of decreasing capillary permeability, lessening high protein transudation into the tissues and expediting the return of progressively normal movements of the parts. Never believe the patient who says that the hand "feels much better after being put in hot water"—the inevitably resultant swelling will leave the hand just a little bit worse for the next day, when it is put in hot water again!

General Emotional Factors

The mind effects the manual activity of any individual. It is essential to understand the two major psychological elements which, after an injury, act to influence the rate of progress of the return of hand function.

The *psychological sequence following loss* is well recognised, predetermined and as unalterable as any other normal physiological function. This sequence falls into four segments: shock and denial, grief and mourning, rehabilitation and restitution and, occasionally, over-reaction.

The initial "shock and denial" can best be likened to the loss of some loved person when the news creates the response of "oh no!". With hand injuries there is an initial denial of the injury to the extent that the patient may even go on working for a minutes or two without admitting that the injury has happened. After a variable period of minutes however the patient has to accept that he has lost part of his hand and the next sequence of loss is seen, namely "grief and mourning". This is the most difficult phase for the medical and physiotherapist attendants to cope with but it is a normal reaction and must be accepted. It is not yet possible for the patient to surmount the fact that he has suffered the injury and he cannot see the prospects of recovery clearly enough to think positively about his rehabilitation. A great deal of patience and understanding is required at this stage but it will pass, unless some inadvertent word or discouraging comment or prospect of fear is introduced which may perpetuate this fearful, sad phase of mourning for the loss of the part or the function of the hand.

"Restitution and rehabilitation" begins when the patient can start to see "the light at the end of the tunnel". It may require surgery to introduce him into this phase and it certainly requires positive psychological advice and encouragement to help him to recognise it. It is then only a matter of the patient accepting that it is possible for the hand to function again that he will make the necessary efforts to bring this about. Recognition of this "turning the corner" and assistance with considered optimism is a very important part of physiotherapy — the change can happen literally overnight!

Finally there is the occasional "over-reaction", where the patient regains more confidence than his injury justifies and he tries to do more with the hand than he should—but this is usually only a temporary phase.

This sequence of psychological changes following the loss of part of the hand or function of the hand is exactly the same as that following loss of any other psychologically important factor in the patient's life, whether a relative or his job. Its recognition and the following of its progress is an essential attribute on the part of the people responsible for hand rehabilitaion.

The other major factor in the recovery rate is the *personality of the patient.* Each individual is trying to retain control of his life pattern according to the dictates of his personality. It is when this control is lost or threatened that patterns of behaviour emerge —depending on the personality type—to try to re-establish control. Failure in this attempt leads on usually to anxiety or depression or a mixture of both.

To group personality types is of necessity a crude selection but, for example, let us take the dependent person, the independent person, the hysterical person and the obsessional person. In this paper no comment is made on truly psychopathic patients although an injury often reveals a paranoid tendency shown by the concept of blame which can repeatedly manifest itself and impede recovery.

The dependent person is only too pleased to hand over the care of the injured hand to his surgeon and physiotherapist. In this way he, or more often she, is relieved of responsibility for achieving recovery. These people tend to be compliant and ingratiating patients, often bring flowers and gifts to help build up a bond with medical personnel and being so careful to keep dressings clean that it is clear on each visit that no attempt has been made to help themselves since the last visit. To break this dependence suddenly could aggravate the patient's loss of self-confidence but once it is recognised, the necessary easing of responsibility onto the patient's own shoulders can proceed as a positive plan. Aggression can be hidden by a dependent pattern of behaviour—and the latent aggression in most rheumatoid patients is shown in their binding of relations and friends to them in a pattern of dependency. It is more dangerous still to disturb this pattern because it would only create further anxiety or depression and usually the exploited husband or relative is quite resigned to accept the load. Directing these emotional forces is the task of medical personnel, trying to establish a stable balance between dependence and independence in these patients.

At the other extreme is the independent person who declines help and wants to be in control of his treatment. No person can be literally independent — merely "pseudo"-independent — because he needs others involved so that he can demonstrate and measure his degree of independence. There is, in fact, a different form of dependency, shown in this dominating type of personality—in an office or an operating theatre—where he controls the scene and any threat to his control may produce a show of anxiety or depression. When this personality type is rocognised in a patient, we should be prepared to accommodate and give advice and treatment in such a way that he thinks he is making the decisions.

The hysterical person is, of course, by definition a woman! It depends on the current definition, but, if we accept that it means a person using sexual assets to achieve non-sexual ends then we must admit that, although occasionally demonstrated by men or even children, this behaviour is in fact largely the prerogative of women. The way she dresses, the "entrance" tending on the theatrical, the use of excessive adjuncts from eyelashes to fingernails all give a warning of the type of patient who will need to have us recognise her attractions if she is to give herself freedom to make the efforts at co-operation which we need in her recovery. The concept of hysteria meaning the falsifying of symptoms for the purpose of gain can be seen in both men and women—but the term has now been changed to "conversion hysteria" or "conversion neurosis" to separate this from the hysterical personality. The level of conscious control of symptoms in conversion hysteria make it possible to see a spectrum from the totally unconscious conversion to the totally conscious conversion—which latter is frank malingering.

The obsessional person is addicted to precision in details and to tidiness in all aspects of his life, so that it is often necessary to explain more of the mechanism of the hand

and the rationale of any surgery or therapy before the patient can accept and co-operate. Once the obsessional patient has accepted the explanation the difficulty is to control the behaviour pattern so that early regimes of treatment are not carried on for years. The rigidity of thinking of this type of person is often seen in the meticulous manner of bank managers, accountants, theatre sisters—and even physiotherapists, who are shocked if the surgeon decides to change a programme of treatment, and feel forced to remind him that "you *always* do so and so!" The recognition that we each ourselves fall into some personality type makes it sometimes doubly difficult to cope with patients.

Finally there is the *pain-prone patient.* This personality type was first recognised by Dr. Engel of Rochester and is a person who subconsciously uses the symptom of pain to achieve their own psychological ends—usually of dependency. After a real or imagined injury this type of patient complains of pain which fails to conform to any anatomical or neurological pattern, is not relieved by therapy either surgical or non-surgical, and is often associated with disuse of the part, although rarely enough to be associated with muscle atrophy. Thus the patient with terrible pain in the hand, radiating through the elbow and shoulder to the side of the head, may have no definite history of injury and apart perhaps from the scar of an ill-advised carpal tunnel decompression—which has confirmed the patient's fear that something was definitely wrong with the hand—the limb is anatomically otherwise normal. The hand is usually held in a useless position, fairly rigid and difficult to examine because of the posture and the complaints of pain — and yet nicotine stains on the second web space may show that the hand is used regularly in smoking! This patient was often formerly dismissed as hysterical—but in fact he has a basic psychological need which is being fulfilled by the pain.

The patient — often for the first time — assumes a role of importance in the home situation. It is clear that, until the other people in his life start to pay him the attention he needs, without the excuse of the pain, there will be little hope of the pain disappearing. Recognising the use of pain to bind others to the patient often requires an investigation of the home and work life and of the responsibilities which the patient is seeking to avoid. The separation of migrants from their natural cultural background and failure to recognise the normal requirements of primitive personalities or the need for a "magical" element in their therapy often delays recovery. The nearest they can get to a sympathetic community is to return home from hospital to similarily orientated individuals. Medical personnel have to overcome this "escape" from scientific therapy to an antagonistic primitive cultural milieu. By meeting members of the home environment and getting them to understand and to help the patient, this impass can be broken.

We must always accentuate the positive aspects of the patient's hand function and accept the complaints. Slowly the positive aspects overcome the negative and the patient realises that his hand is indeed working better.

Ill-advised surgery based on symptoms of psychogenic origin may lead to explorations on the cervical spine, proximal joints or peripheral nerves — and may well perpetuate a previously retrievable situation.

CONCLUSION

"It is not what we do to the patient's hand that matters—but what he does with what we have done!" This axiom of McIndoe underlines the personality factor in each patient.

We must recognise the personal nature of the contract in all our dealings in the restoration of function to the human hand.